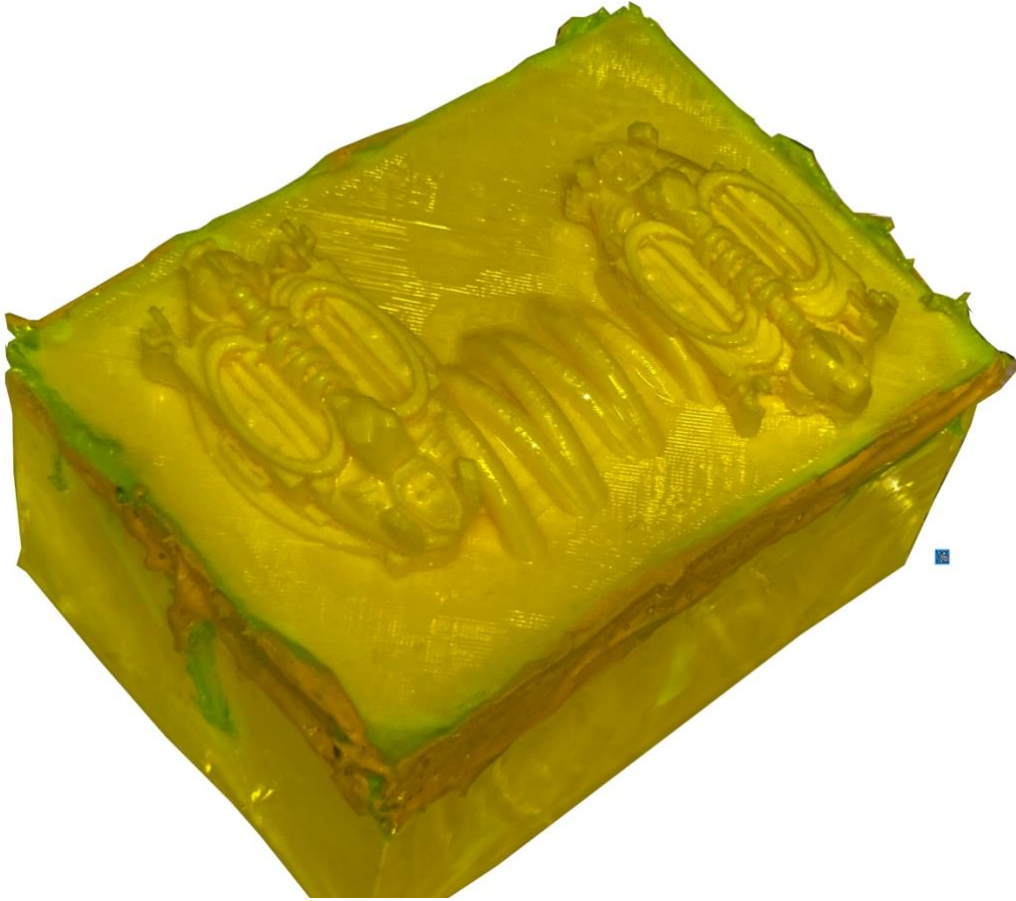


Chromosome in a Box

By Fred Truck

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Chromosome in a Box is a 3D computer print. These are its technical specs:

Printer used: Ender-3 S1 Pro

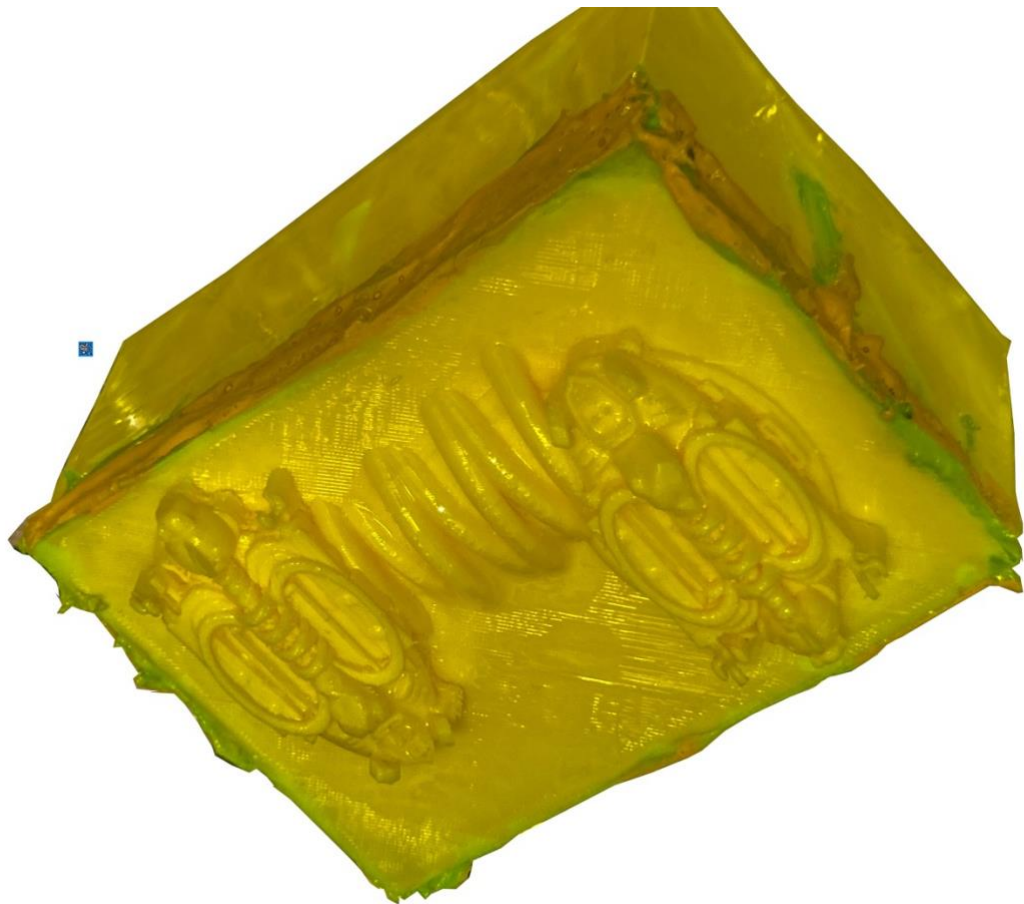
Filament: PLA Highlight Yellow

Time to Print: 1.5 days

Comments:

3D computer prints are unusual in that though they are prints, they can behave like sculptures, since they have 3 dimensions. This unusual combination of properties seemed to me to change the ground rules of sculpture as well as prints, and encouraged me to explore unusual aspects of art.

The image I chose is that of a human chromosome, but I personified it by giving the DNA strands two heads, based very loosely on the classic Mayan Sun God. Sometimes, when the Sun God appeared in his 2-headed form, the front head was in the normal position, but the back head was upside down. The back head is a Death's Head.



Chromosome in a Box rotated 180 degrees.

The horizontal symmetry of the Chromosome means that the image on the Box cannot be oriented by normal right/left directions because with a 180-degree rotation, you see the front and rear heads are the same.

There is another surprise in this Box. If you turn it over, you can see the 2 DNA strands wrapped around the staff of the Caduceus.



This is the Modern Caduceus, a Chromosome in a Box. It is struggling against the container walls, looking for a way out. This is not the Caduceus of the Classic Greco-Roman tradition. It is science! Information must be free!

This sculpture/print is very small compared to the works of the major sculptors and even print makers working today. The Yellow Box measures 5.75 x 4 x 2.875”.

It is very small because it is meant to be handled, so its meanings can be extracted perceptually and tactilely.

The Name

I've given this box different names, largely based on how I'm feeling at the moment. The first name is the one I use the most:

Chromosome in a Box.

I've given the box other names though, such as:

The Yellow Box, (referring to some of the boxes by Duchamp).

Or, again:

Modern Caduceus

Or:

Chromosome Sun God.

The last name, Chromosome Sun God, disqualified itself due to its religiosity. I felt the name of this work should be strictly non-denominational.

As for the others, well...

I use them as I need them.

The Technology

I began using computer technology in 1981 for art. I have been comfortable writing my own code, when I needed to, including Assembly Language. All this goes to explain I'm not a novice with digital technology...except with 3D Printing.

My printer, an Ender-3 SI Pro, is considered a good, entry-level 3D printer. Even so, a beginner will be confronted with many controls that come with the territory of 3D printing that are unfamiliar.

There are filaments (usually PLA plastic from which the image is constructed), nozzle diameters, nozzle temperatures, clogged nozzles, build bed temperatures, printer speed and a host of other settings.

The chief problem that assails the operator of a 3D printer is that the extruded plastic fails to adhere to the build bed. In that case, your print may look like this:



Since the technology of 3D printers is not mature, to master the settings requires a lot of patience and trial and error. Keep at it, and you will find the right settings, as I did eventually.

I hope you enjoy **Chromosome in a Box**.